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Sequence Listing was accepted.

See attached Validation Report.

If you need help call the Patent Electronic Business Center at (866)  
217-9197 (toll free).

Reviewer: Durreshwar Anjum

Timestamp: [year=2007; month=11; day=20; hr=10; min=39; sec=38; ms=945;  
]

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Application No: 09402093

Version No: 6.0

**Input Set:****Output Set:****Started:** 2007-10-30 20:58:25.907**Finished:** 2007-10-30 20:58:28.829**Elapsed:** 0 hr(s) 0 min(s) 2 sec(s) 922 ms**Total Warnings:** 72**Total Errors:** 16**No. of SeqIDs Defined:** 72**Actual SeqID Count:** 72

Error code	Error Description
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W 213	Artificial or Unknown found in <213> in SEQ ID (2)
W 213	Artificial or Unknown found in <213> in SEQ ID (3)
W 213	Artificial or Unknown found in <213> in SEQ ID (4)
W 213	Artificial or Unknown found in <213> in SEQ ID (5)
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W 213	Artificial or Unknown found in <213> in SEQ ID (7)
W 213	Artificial or Unknown found in <213> in SEQ ID (8)
W 213	Artificial or Unknown found in <213> in SEQ ID (9)
W 213	Artificial or Unknown found in <213> in SEQ ID (10)
W 213	Artificial or Unknown found in <213> in SEQ ID (11)
W 213	Artificial or Unknown found in <213> in SEQ ID (12)
W 213	Artificial or Unknown found in <213> in SEQ ID (13)
W 213	Artificial or Unknown found in <213> in SEQ ID (14)
W 213	Artificial or Unknown found in <213> in SEQ ID (15)
W 213	Artificial or Unknown found in <213> in SEQ ID (16)
W 213	Artificial or Unknown found in <213> in SEQ ID (17)
W 213	Artificial or Unknown found in <213> in SEQ ID (18)
W 213	Artificial or Unknown found in <213> in SEQ ID (19)
W 213	Artificial or Unknown found in <213> in SEQ ID (20)

**Input Set:**

**Output Set:**

**Started:** 2007-10-30 20:58:25.907  
**Finished:** 2007-10-30 20:58:28.829  
**Elapsed:** 0 hr(s) 0 min(s) 2 sec(s) 922 ms  
**Total Warnings:** 72  
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**No. of SeqIDs Defined:** 72  
**Actual SeqID Count:** 72

Error code	Error Description
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E 257	Invalid sequence data feature in <221> in SEQ ID (52)
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SEQUENCE LISTING

<110> OHSUYE, KAZUHIRO  
YABUTA, MASAYUKI  
SUZUKI, YUJI

<120> PROCESS FOR PRODUCING PEPTIDES USING A HELPER PEPTIDE

<130> 47259.0373

<140> 09402093

<141> 1999-09-29

<150> PCT/JP99/00406

<151> 1999-01-29

<150> JP 10-32272

<151> 1998-01-30

<160> 72

<170> PatentIn Ver. 3.3

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<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
peptide

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Asp Asp Asp Lys

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<210> 2

<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
peptide

<400> 2

Ile Glu Gly Arg

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<210> 3

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 3  
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<210> 4  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

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Val Asp Asp Asp Asp Lys  
1 5

<210> 5  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

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1 5

<210> 6  
<211> 10  
<212> PRT  
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<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 6  
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1 5 10

<210> 7  
<211> 10  
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<220>

<223> Description of Artificial Sequence: Synthetic  
peptide

<400> 7

His Arg His Lys Arg Ser His His His His  
1 5 10

<210> 8

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
peptide

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Ser Asp His Lys Arg  
1 5

<210> 9

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
peptide

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<210> 10

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
peptide

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1 5 10 15

Gly Ser Gly Ser  
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<210> 11

<211> 69  
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<220>  
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Gln Met His Gly Tyr Asp Ala Glu Leu Arg Leu Tyr Arg Arg His His  
1 5 10 15  
  
cgg tgg ggt cgt tcc gga tcc 69  
Arg Trp Gly Arg Ser Gly Ser  
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<210> 12  
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<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<400> 12  
Gln Met His Gly Tyr Asp Ala Glu Leu Arg Leu Tyr Arg Arg His His  
1 5 10 15  
  
Arg Trp Gly Arg Ser Gly Ser  
20

<210> 13  
<211> 47  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
oligonucleotide

<400> 13  
tgggttatgac ggggagctcc gcctgtatcg ccgtcatcac gggtccg 47

<210> 14  
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<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic  
oligonucleotide

<400> 14  
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<210> 15  
<211> 24  
<212> DNA  
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<223> Description of Artificial Sequence: Synthetic  
primer

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<210> 16  
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<223> Description of Artificial Sequence: Synthetic  
primer

<400> 16  
aaaggtacct tccgcatgcc gcggatgtcg agaagg 36

<210> 17  
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<220>

<223> Description of Artificial Sequence: Synthetic  
primer

<400> 17  
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<210> 18  
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<220>

<223> Description of Artificial Sequence: Synthetic  
primer



<400> 18

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29

<210> 19

<211> 627

<212> DNA

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<220>

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<222> (82)..(543)

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aatttcacac aggaaacagc t atg acc atg att acg gat tca ctg gcc gtc 111  
Met Thr Met Ile Thr Asp Ser Leu Ala Val  
1 5 10

gtt tta caa cgt aaa gac tgg gat aac cct ggc gtt acc caa ctt aat 159  
Val Leu Gln Arg Lys Asp Trp Asp Asn Pro Gly Val Thr Gln Leu Asn  
15 20 25

cgc ctt gca gca cat ccc cct ttc gcc agc tgg cgt aat agc gac gac 207  
Arg Leu Ala Ala His Pro Pro Phe Ala Ser Trp Arg Asn Ser Asp Asp  
30 35 40

gcc cgc acc gat cgc cct tcc caa cag ttg cgc agc ctg aat ggc gaa 255  
Ala Arg Thr Asp Arg Pro Ser Gln Gln Leu Arg Ser Leu Asn Gly Glu  
45 50 55

tgg cgc ttt gcc tgg ttt ccg gca cca gaa gcg gtg ccg gca agc ttg 303  
Trp Arg Phe Ala Trp Phe Pro Ala Pro Glu Ala Val Pro Ala Ser Leu  
60 65 70

ctg gag tca gat ctt cct gag gcc gat act gtc gtc gtc ccc tca aac 351  
Leu Glu Ser Asp Leu Pro Glu Ala Asp Thr Val Val Val Pro Ser Asn  
75 80 85 90

tgg cag atg cac ggt tac gat gcg atg cat ggt tat gac gcg gag ctc 399  
Trp Gln Met His Gly Tyr Asp Ala Met His Gly Tyr Asp Ala Glu Leu  
95 100 105

cgc ctg tat cgc cgt cat cac ggt tcc gga tcc cct tct cga cat ccg 447  
Arg Leu Tyr Arg Arg His His Gly Ser Gly Ser Pro Ser Arg His Pro  
110 115 120

cgg cat gcg gaa ggt acc ttt acc agc gat gtg agc tcg tat ctg gaa 495  
Arg His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu  
125 130 135

ggc cag gcg gca aaa gaa ttc atc gcg tgg ctg gtg aaa ggc cgt ggt 543

Gly Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg Gly  
140 145 150

taagtcgaca gcccgcttaa tgagcgggct tttttttctc ggaattaatt ctcatgtttg 603

acagcttatc atcgataagc tttta 627

<210> 20

<211> 154

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic  
fusion protein

<400> 20

Met Thr Met Ile Thr Asp Ser Leu Ala Val Val Leu Gln Arg Lys Asp  
1 5 10 15

Trp Asp Asn Pro Gly Val Thr Gln Leu Asn Arg Leu Ala Ala His Pro  
20 25 30

Pro Phe Ala Ser Trp Arg Asn Ser Asp Asp Ala Arg Thr Asp Arg Pro  
35 40 45

Ser Gln Gln Leu Arg Ser Leu Asn Gly Glu Trp Arg Phe Ala Trp Phe  
50 55 60

Pro Ala Pro Glu Ala Val Pro Ala Ser Leu Leu Glu Ser Asp Leu Pro  
65 70 75 80

Glu Ala Asp Thr Val Val Val Pro Ser Asn Trp Gln Met His Gly Tyr  
85 90 95

Asp Ala Met His Gly Tyr Asp Ala Glu Leu Arg Leu Tyr Arg Arg His  
100 105 110

His Gly Ser Gly Ser Pro Ser Arg His Pro Arg His Ala Glu Gly Thr  
115 120 125

Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly Gln Ala Ala Lys Glu  
130 135 140

Phe Ile Ala Trp Leu Val Lys Gly Arg Gly  
145 150

<210> 21

<211> 187

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic

fusion protein

<400> 21

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Met Thr Met Ile Thr Asp Ser Leu Ala Val Val Leu Gln Arg Lys Asp
 1           5           10           15

Trp Asp Asn Pro Gly Val Thr Gln Leu Asn Arg Leu Ala Ala His Pro
          20           25           30

Pro Phe Ala Ser Trp Arg Asn Ser Asp Asp Ala Arg Thr Asp Arg Pro
          35           40           45

Ser Gln Gln Leu Arg Ser Leu Asn Gly Glu Trp Arg Phe Ala Trp Phe
 50           55           60

Pro Ala Pro Glu Ala Val Pro Ala Ser Leu Leu Glu Ser Asp Leu Pro
 65           70           75           80

Glu Ala Asp Thr Val Val Val Pro Ser Asn Trp Gln Met His Gly Tyr
          85           90           95

Asp Ala Pro Ile Tyr Thr Asn Val Thr Tyr Pro Ile Thr Val Asn Pro
          100          105          110

Pro Phe Val Pro Thr Glu Pro His His His His His Gly Gly Arg Gln
          115          120          125

Met His Gly Tyr Asp Ala Glu Leu Arg Leu Tyr Arg Arg His His Arg
          130          135          140

Trp Gly Arg Ser Gly Ser Pro Ser Arg His Lys Arg His Ala Glu Gly
          145          150          155          160

Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly Gln Ala Ala Lys
          165          170          175

Glu Phe Ile Ala Trp Leu Val Lys Gly Arg Gly
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<210> 22

<211> 184

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
fusion protein

<400> 22

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Met Thr Met Ile Thr Asp Ser Leu Ala Val Val Leu Gln Arg Lys Asp
 1           5           10           15

Trp Asp Asn Pro Gly Val Thr Gln Leu Asn Arg Leu Ala Ala His Pro
          20           25           30

Pro Phe Ala Ser Trp Arg Asn Ser Asp Asp Ala Arg Thr Asp Arg Pro

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35

40

45

Ser Gln Gln Leu Arg Ser Leu Asn Gly Glu Trp Arg Phe Ala Trp Phe  
 50 55 60

Pro Ala Pro Glu Ala Val Pro Ala Ser Leu Leu Glu Ser Asp Leu Pro  
 65 70 75 80

Glu Ala Asp Thr Val Val Val Pro Ser Asn Trp Gln Met His Gly Tyr  
 85 90 95

Asp Ala Pro Ile Tyr Thr Asn Val Thr Tyr Pro Ile Thr Val Asn Pro  
 100 105 110

Pro Phe Val Pro Thr Glu Pro His His His His His Gly Gly Arg Gln  
 115 120 125

Met His Gly Tyr Asp Ala Glu Leu Arg Leu Tyr Arg Arg His His Gly  
 130 135 140

Ser Gly Ser Pro Ser Arg His Lys Arg His Ala Glu Gly Thr Phe Thr  
 145 150 155 160

Ser Asp Val Ser Ser Tyr Leu Glu Gly Gln Ala Ala Lys Glu Phe Ile  
 165 170 175

Ala Trp Leu Val Lys Gly Arg Gly  
 180

&lt;210&gt; 23

&lt;211&gt; 184

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: Synthetic  
 fusion protein

&lt;400&gt; 23

Met Thr Met Ile Thr Asp Ser Leu Ala Val Val Leu Gln Arg Lys Asp  
 1 5 10 15

Trp Asp Asn Pro Gly Val Thr Gln Leu Asn Arg Leu Ala Ala His Pro  
 20 25 30

Pro Phe Ala Ser Trp Arg Asn Ser Asp Asp Ala Arg Thr Asp Arg Pro  
 35 40 45

Ser Gln Gln Leu Arg Ser Leu Asn Gly Glu Trp Arg Phe Ala Trp Phe  
 50 55 60

Pro Ala Pro Glu Ala Val Pro Ala Ser Leu Leu Glu Ser Asp Leu Pro  
 65 70 75 80

Glu Ala Asp Thr Val Val Val Pro Ser Asn Trp Gln Met His Gly Tyr  
 85 90 95

Asp	Ala	Pro	Ile	Tyr	Thr	Asn	Val	Thr	Tyr	Pro	Ile	Thr	Val	Asn	Pro
			100					105					110		
Pro	Phe	Val	Pro	Thr	Glu	Pro	His	His	His	His	His	Gly	Gly	Arg	Gln
		115					120					125			
Met	His	Gly	Tyr	Asp	Ala	Glu	Leu	Arg	Leu	Tyr	Arg	Arg	His	His	Gly
		130					135				140				
Ser	Gly	Ser	Pro	Ser	Arg	His	Pro	Arg	His	Ala	Glu	Gly	Thr	Phe	Thr
145					150					155					160
Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly	Gln	Ala	Ala	Lys	Glu	Phe	Ile
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Ala	Trp	Leu	Val	Lys	Gly	Arg	Gly								
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<220>  
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<400> 24  
 Ser Cys His Lys Arg  
 1 5

<210> 25  
 <211> 6  
 <212> PRT  
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<220>  
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<400> 25  
 Arg His His Gly Pro Gly  
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<210> 26  
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<220>  
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<400> 26

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Ser Ser Tyr Leu Glu Gly Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu  
20 25 30  
Val Lys Gly Arg Gly  
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<210> 27

<211> 30

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic  
peptide

<400> 27

His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
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Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg  
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<210> 28

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<212> PRT

<213> Artificial Sequence

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Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg Gly  
20 25 30

<210> 29

<211> 28

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic  
peptide

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His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys  
20 25

<210> 30

<211> 29

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic  
peptide

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His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly  
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<210> 31

<211> 30

<212> PRT

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<223> Description of Artificial Sequence: Synthetic  
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1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg  
20 25 30

<210> 32

<211> 28

<212> PRT

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<223> Description of Artificial Sequence: Synthetic  
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